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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/576,259	04/18/2006	Junko Kakegawa	P29770	8831
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EXAMINER LACLAIR, DARCY D				
ART UNIT		PAPER NUMBER		
1796				
NOTIFICATION DATE		DELIVERY MODE		
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary

Application No.

10/576,259

Applicant(s)

KAKEGAWA, JUNKO

Examiner

Darcy D. LaClair

Art Unit

1796

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 March 2009.
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3,4,7-15,19 and 20 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1,3,4,7-15,19 and 20 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB-08)
Paper No(s)/Mail Date _____
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____

DETAILED ACTION

1. All outstanding rejections, except for those maintained below are withdrawn in light of the amendment filed on **3/16/2009**.

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

The examiner confirms applicant's assumption that that there was an incorrectly checked box on the Office Action Summary Sheet. Checked box 2a) was inadvertently checked, and box 2b) was intended to be checked.

It is also noted that although the statement of rejection in **paragraph 4** recited **Claims 1, 3-4, 7-8, 14-17, and 20, Claims 9, 18 and 19** were discussed in the body of the rejection and indicated as rejected on the Office Action Summary (PTO-326). As such, these claims stood rejected at the time of mailing of the previous office action.

Claim 1 has been amended to recite **1)** a molded article rather than a resin composition, **2)** a composition comprising resin and crystalline inorganic filler, where the resin consists of components (A1), (A2), and (B), and **3)** that the molded article is a bath product, washroom product, toilet product, kitchen product, or sink product. Support for these amendments is found in previous Claims 17 and 18, and the previous language of Claim 1. Additionally **Claim 4** has been amended to narrow the scope of the epoxy resin content. Support is noted on p. 26 of the specification, paragraph 1.

The grounds of rejection have not changed except in so far as they are adjusted to address issues raised by applicant's amendment. Thus the following action is properly made **FINAL**.

Claim Objections

2. **Claim 4** is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form.

The objection is adequately set forth in **paragraph 2** of the office action mailed **3/16/2009**, and is incorporated here by reference.

Claim Rejections - 35 USC § 112

3. **Claim 4** is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The rejection is adequately set forth in **paragraph 3** of the office action mailed **3/16/2009**, and is incorporated here by reference.

Claim Rejections - 35 USC § 103

4. **Claims 1, 3-4, 7-9, 10-11, 14-15, and 19-20** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Maekawa (WO2002/090435)** in view of **Nakano et al. (US 5,302,645)** and **Kudou et al. (US 2002/0123570)**.

The rejection is adequately set forth in **paragraph 4** of the office action mailed **3/16/2009**, and is incorporated here by reference.

The amendments, as follows, are discussed below:

Amendment 1) a molded article rather than a resin composition,

Amendment 2) a composition comprising resin and crystalline inorganic filler,
where the resin consists of components (A1), (A2), and (B), and

Amendment 3) that the molded article is a bath product, washroom product, toilet product, kitchen product, or sink product. Support for these amendments is found in previous Claims 17 and 18, and the previous language of Claim 1.

Amendment 4) Claim 4 has been amended to narrow the scope of the epoxy resin content. Support is noted on p. 26 of the specification, paragraph 1.

With regard to amendments 1) and 3), see the previous rejection of Claim 17. Maekawa specifically teaches that it is possible to obtain *any* shape of the molded product by varying a shape of the mold. Although car parts or the like are taught explicitly, these are by no means the exclusive use of the resin. (See par [0090]) Furthermore, Maekawa *does* teach a variety of beneficial mechanical properties of the polytrimethylene terephthalate resin such as good appearance, superior mechanical properties, and good fatigue resistance. (See par [0121]) These are among the properties which Kudou teaches are beneficial to applications such as sinks, drains, and housing equipment. (See par [0082],[0087]) It would be obvious, given the teachings of Maekawa to consider multiple uses of the resin ("*any* shape") and to note the requirements of moldings such as sinks, drains, and housing equipment, arriving at the conclusion that the resin of Maekawa would provide these properties.

With regard to amendment 2), see the previous rejection of Claim 1. Maekawa teaches a polytrimethylene terephthalate resin (see abstract) having other thermoplastic resins such as polycarbonate (see par [0088]) and film forming agents such as epoxy polymers (see par [0057]). Nakano teaches 1 to 25 parts by weight of epoxy resin and 5 to 50 parts by weight of thermoplastic resin (See abstract) Based on the absence of a specific teaching with regard to the content of polycarbonate and epoxy from Maekawa, it would be obvious to one of ordinary skill in the art to employ these additional polymers, which are not the main polymer in the composition, at similar concentrations. The content of filler is in the range of 5 to 70% by weight of the composition (see abstract) This is consistent with 5.26 to 233.3 parts of filler per 100 parts of resin.

With regard to amended Claim 4, Nakano teaches 1 to 25 parts by weight of epoxy resin (see discussion above, with regard to amendment 2), which encompasses applicant's amended range. It is well settled that where the prior art describes the components of a claimed compound or compositions in concentrations within or overlapping the claimed concentrations a prima facie case of obviousness is established. See *In re Harris*, 409 F.3d 1339, 1343, 74 USPQ2d 1951, 1953 (Fed. Cir. 2005); *In re Peterson*, 315 F.3d 1325, 1329, 65 USPQ 2d 1379, 1382 (Fed. Cir. 1997); *In re Woodruff*, 919 F.2d 1575, 1578 16 USPQ2d 1934, 1936-37 (CCPA 1990); *In re Malagari*, 499 F.2d 1297, 1303, 182 USPQ 549, 553 (CCPA 1974)

5. **Claims 4, 12 and 13** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Maekawa** in view of **Nakano et al.**, **Kudou et al.** and **Largman et al (US**

4,403,052), with *evidence* provided by **MatWeb (ENC 1299)**
(<http://www.matweb.com/>).

The rejection is adequately set forth in **paragraph 5** of the office action mailed **3/16/2009**, and is incorporated here by reference. Additionally, see the discussion, above in **paragraph 4**, detailing how the cited prior art reads on the amendments to **Claim 1**, from which **Claims 4, 12, and 13** depend, as well as on amended **Claim 4**.

Response to Arguments

Applicant's arguments filed **3/16/2009** have been fully considered. Specifically, applicant argues **(A)** Claims 1 and 4 have been amended and applicant submits that these amendments clarify which portions of the composition encompasses the term "comprising," and which portions encompass the term "consisting," and furthermore the amendments to Claim 4 is even clearer in limiting the previous claim with respect to the amount of epoxy resin not grafted on the inorganic filler, **(B)** Applicant submits that claim 4 is clear and definite in view of the parent claim and specification, and directs attention to the specification, pages 22 and 23, paragraph [0023] where the test for determining the amount grafted on the inorganic filler is described, **(C)** Claim 10 has been amended to depend from Claim 9, **(D)** Neither Maekawa in view of Nakano and Kudou, nor Maekawa in view of Nakano, Kudou, and Largman render the present invention obvious; Maekawa does not teach kitchen, bath, toilet, or washroom products; Furthermore, the combination of Maekawa, Nakano, and Kudou would not be obvious to one of ordinary skill in the art because the object in Maekawa is to provide a

composition with improved fatigue properties for car parts, but is silent with regard to compositions containing PTT and the properties thereof; since Maekawa is silent with respect to these properties, there would be no reason to combine Maekawa with any secondary document that addresses such objectives, therefore a *prima facie* case of obviousness has not been established, **(E)** Kudou discloses polyoxymethylene resins, which is not polytrimethylene terephthalate resins as claimed, thus one of ordinary skill in the art would not be lead by Kudou to chose polytrimethylene terephthalate resins for the products claimed, but rather would choose polyoxymethylene resins, and Kudou does not cure any deficiency in the other documents cited in the rejection.

With respect to argument (A), applicant's arguments have been considered. With respect to the objection to Claim 1, the arguments are **persuasive**, and the objection to Claim 1 is withdrawn. With respect to Claim 4, the arguments are **not persuasive**. This claim is still difficult to understand and unclear. The claim refers to the epoxy resin in a part of the resin not grafted on the crystalline inorganic filler in an amount from 0.3 to 10% by weight. The total resin content of the composition is 100 parts, and the epoxy resin is 0.3 to 10 parts by weight. This is 0.3 to 10% by weight. This appears to fail to further limit the subject matter of a previous claim. In order to further clarify the claim, it is suggested that Claim 1, from which this claim depends, make it clear that there is a portion of the resin grafted on the crystalline filler, and a portion of the resin which is not grafted on the crystalline inorganic filler.

With respect to argument (B), applicant's arguments have been considered, but are **not persuasive**. The claim refers to the epoxy resin in a part of the resin not

grafted on the crystalline inorganic filler. Applicant has directed attention to paragraph [0023], which does teach how to determine the amount of resin grafted onto the filler, however this does not teach the content of epoxy in this portion of the resin, nor does it teach a method of calculating the portion of epoxy in the resin, so while the examiner concurs with applicant that it would be clear to one of ordinary skill in the art that the amount not grafted on the inorganic filler could be calculated, it is still not clear how the epoxy content of this part of the resin would be calculated, whether by content in the total resin composition, or by some other means. Specifically, is the epoxy more, less, or equally likely to be grafted on the filler than the other components in the resin?

With respect to argument (C), applicant's arguments have been considered and the arguments are **persuasive**. The amendment wherein Claim 10 depends from Claim 9 provides antecedent basis for the glass fiber in the composition.

With respect to argument (D), applicant's arguments have been considered, but are **not persuasive**. First, Maekawa teaches not only car use, but also industrial use for the polytrimethylene terephthalate resin. (See par [0002]) Maekawa specifically teaches that it is possible to obtain **any** shape of the molded product by varying a shape of the mold. Although car parts or the like are taught explicitly, these are by no means the exclusive use of the resin. (See par [0090]) Furthermore, Maekawa *does* teach a variety of beneficial mechanical properties of the polytrimethylene terephthalate resin such as good appearance, superior mechanical properties, and good fatigue resistance. (See par [0121]) These are among the properties which Kudou teaches are beneficial to applications such as sinks, drains, and housing equipment. (See par [0082],[0087])

It would be obvious, given the teachings of Maekawa to consider multiple uses of the resin ("**any** shape") and to note the requirements of moldings such as sinks, drains, and housing equipment, arriving at the conclusion that the resin of Maekawa would provide these properties.

With respect to argument (E), applicant's arguments have been considered, but are **not persuasive**. Although Kudou teaches polyoxymethylene resins and not polytrimethylene terephthalate resins, the primary use of Kudou in the rejection is to teach a content of polymers already presented by Maekawa and to teach the use of various types of fillers and particle sizes to achieve improved surface properties in resin. (See Office Action Mailed 12/16/08, paragraph 4, page 5, With regard to Claim 1, indent beginning with Kudou) The teachings of Kudou are also used to support or elaborate on points which are taught by the primary reference, such as additional use of epoxy (see Office Action Mailed 12/16/08, paragraph 4, page 6, With regard to Claim 4) and specific molding shapes (see Office Action Mailed 12/16/08, paragraph 4, page 6, With regard to Claim 18 and 19). As Kudou is the secondary reference, providing elaboration on points in Maekawa, whether or not one of ordinary skill in the art would be motivated to make a polytrimethylene terephthalate sink product based on Kudou is moot, and the point at issue is whether one reading Maekawa, given the teachings of Kudou, would be motivated to do the same.

With regard to the epoxy content, Maekawa teaches the use of epoxy in the resin system as a filler treating agent, (see par [0089]) but does not explicitly teach using the epoxy in the composition as well. However the presence of the epoxy as an agent to

improve compatibility of the filler suggests compatibility with the resin system of Maekawa. One of ordinary skill in the art, given Kudou's teaching would be aware of this compatibility and consider the teachings of Kudou that the epoxy improves moldability, (see col 4 line 26-36), and this would lead to consideration of the use of epoxy as a component in the resin blend as well.

With regard to molding, Maekawa teaches that teaches that the composition can be used to obtain **any** shape, (see par [0090]) and that this composition would have good appearance, superior mechanical properties, and good fatigue resistance. (See par [0021]) The teachings of Kudou provide that these properties are important to molding products, and teach specifically sinks and housing equipment. (See par [0082]), [0087]) Applicant suggests that there is nothing in Kudou that would suggest the selection of polytrimethylene terephthalate resins, which is a moot point. Maekawa is the primary reference, and there is ample motivation in Maekawa to select, for an end use of the polytrimethylene terephthalate resin product, the molding shape of a sink, given the teachings of Kudou with regard to mechanical properties which are beneficial to a sink.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Darcy D. LaClair whose telephone number is (571)270-5462. The examiner can normally be reached on Monday-Friday 8:30-6.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on 571-272-1119. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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